UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,401	02/25/2002	Lynne Marie Evans	013.0226.01	6885

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EXAMINER
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ART UNIT	PAPER NUMBER
2672	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/084,401	EVANS, LYNNE MARIE
	Examiner	Art Unit
	Jeffery A Brier	2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .
2a)☐ This action is **FINAL**.　　　　2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
　　closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44* is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-44* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *25 February 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a)☐ All　b)☐ Some * c)☐ None of:
　　　　1.☐ Certified copies of the priority documents have been received.
　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____ .
　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　　　application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date *9/7/04, 4/26/04, 6/6/02*
4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

Detailed Action

Drawings

1.   The drawings are objected to for the following reasons.

The drawings do not have sheet nos. as required by 37 CFR 1.84(t) which states:

> (t) *Numbering of sheets of drawings.* The sheets of drawings should be
> numbered in consecutive Arabic numerals, starting with 1, within the sight
> as defined in paragraph (g) of this section. These numbers, if present,
> must be placed in the middle of the top of the sheet, but not in the margin.
> The numbers can be placed on the right-hand side if the drawing extends
> too close to the middle of the top edge of the usable surface. The drawing
> sheet numbering must be clear and larger than the numbers used as
> reference characters to avoid confusion. The number of each sheet should
> be shown by two Arabic numerals placed on either side of an oblique line,
> with the first being the sheet number and the second being the total
> number of sheets of drawings, with no other marking.

Figure 12 covers two sheets of the drawings. This figure should be labeled on

the first of the two sheets as Figure 12(A) and on the second of the two sheets as

Figure 12(B) as required by 37 CFR 1.84(u)(1).   37 CFR 1.84(u) states:

> (u) *Numbering of views.*
> (1) The different views must be numbered in consecutive Arabic
> numerals, starting with 1, independent of the numbering of the
> sheets and, if possible, in the order in which they appear on the
> drawing sheet(s). Partial views intended to form one complete view,
> on one or several sheets, must be identified by the same number
> followed by a capital letter. View numbers must be preceded by the
> abbreviation "FIG." Where only a single view is used in an
> application to illustrate the claimed invention, it must not be
> numbered and the abbreviation "FIG." must not appear.
>
> (2) Numbers and letters identifying the views must be simple and
> clear and must not be used in association with brackets, circles, or
> inverted commas. The view numbers must be larger than the
> numbers used for reference characters.

Corresponding amendments to the specification will be needed to properly identify Figure 12(A) and Figure 12(B).

Page 9 line 25 refers to vectors 64a-c while Figure 4(B) shows vectors 64a, b, d.

Figure 10 block 131 described at page 12 line 23, Figure 11 block 141 described at page 13 line 4, Figure 12 block 161 described at page 13 line 23 and Figure 14 block 191 described at page 14 line 29 do not clearly describe in the block the function of the respective block nor does the specification clarify this issue.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they do not include the following reference sign(s) mentioned in the

description:

Page 8 at line 26 describes anchor points 48, however, anchor points 48 are not

illustrated in figure 3 nor in any figure.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in

reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. Each drawing sheet

submitted after the filing date of an application must be labeled in the top margin as

either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the

changes are not accepted by the examiner, the applicant will be notified and informed of

any required corrective action in the next Office action. The objection to the drawings

will not be held in abeyance.

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they include the following reference character(s) not mentioned in the

description:

Reference numbers 43, 73, 83, 85, 85, 110, and 111 shown in at least one of

figures 3, 5, 6, and 8 but they are not described in the specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to

the specification to add the reference character(s) in the description in compliance with

37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4.   The disclosure is objected to because of the following informalities:

On page 8 lines 21, 26 and 29 cluster spine 41 should be cluster spine 42.

On page 10 line 18 cluster spine 75 should be cluster spine 72.

On page 11 line 1 62 should be 42.

On page 12 lines 1-3 describes a display space 120 while figure 9 shows a flowchart.

On page 15 line 11 describes a method 120 of figure 8 while figure 8 does not have reference number 120.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

6.   Claims 1-44 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claims 1, 14, 28, and 36:

These claims do not clearly claim the invention. These claims do not clearly

claim arranging displayed visual clusters. The claimed "the anchor point comprising at

least one open edge formed along a vector" does not clearly claim the invention. Page

9 lines 9-13 of applicants specification states:

> An open edge is a point along the edge of a cluster at which another
> cluster can be adjacently placed. Slight overlap within 20% with other
> clusters is allowed. An open edge is formed by projecting vectors 54a-e
> outward from the center 53 of the endpoint cluster 52, preferably at
> normalized angles. The clusters in the cluster spine 51 are arranged in
> order of decreasing cluster size.

The claims need to clearly claim an open edge is a point along the edge of a displayed

cluster. Applicants invention is preventing the problem of "When displayed, the

overlaying or overlapping of clusters could mislead the viewer into perceiving data

dependencies where there are none", see applicant's specification at page 3 lines 8-10.

Clarifying the claims is needed to clearly claim applicants solution to the problem

described by applicant at page 3 lines 8-18 of the specification.   Additionally the

claimed "the anchor point comprising at least one open edge formed along a vector" is

an open ended claim limitation due to the word comprising that does not limit the anchor

point to the described point along an edge of a displayed cluster. Therefore this claim

limitation is indefinite because it brings into the claim many anchor points which are not

the described a point along an edge where another cluster can be adjacently placed

with slight overlap within 20%.

Claims 11 and 24:

These claims do not clearly claim the intended meaning of "one such cluster" and

"one such open end". Claim 1 at line 10 and claim 14 at line 10 also claim "one such

open end". The intended meaning here is also not clear. Claim 11 is not clear as to

whether if the "one such open end" of claim 11 is the same "one such open end" of

parent claim 1. Similarly claim 24 is not clear as to whether if the "one such open end"

of claim 24 is the same "one such open end" of parent claim 14.

Claims 12 and 25:

These claims do not claim where each cluster having a theme different than the

common theme is placed.

Claims 27 and 44:

These claims claim *A computer-readable storage medium holding code for*

performing the method. This claim does not state how code by itself performs a

method. This claim needs to clearly claim an invention that is patentable under 35 USC

101. Computer-readable instructions or source code cause a computer to perform a

method. Applicants specification at page 7 lines 19-26 which state:

> Each module is a computer program, procedure or module written as
> source code in a conventional programming language, such as the C++
> programming language, and is presented for execution by the CPU as
> object or byte code, as is known in the art. The various implementations of
> the source code and object and byte codes can be held on a computer-
> readable storage medium or embodied on a transmission medium in a
> carrier wave. The cluster display system 11 operates in accordance with a
> sequence of process steps, as further described below with reference to
> FIG. 8.

The examiner suggests changing the preamble of claims 27 and 44 to better claim how

applicants computer program is executed by the computer to perform the claimed

method. The preamble could be changed to read as: A computer-readable storage

medium storing source code, said source code causing a computer to perform the

method of claims ... .

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

8.   Claims 1, 8-14, 21-32, 34-40, and 42-44 are rejected under 35 U.S.C. 102(e) as

being anticipated by Gallivan, U.S. Patent No. 6,778,995.

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome

either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the

invention "by another," or by an appropriate showing under 37 CFR 1.131.

Gallivan teaches a system, method, and computer readable medium for storing a

program for causing a computer to perform the method. The claimed "the anchor point

comprising at least one open edge formed along a vector" makes the claim very broad

and does not define what constitutes an open edge. Gallivan shows in figure 14 a

cluster 193 attached to an open edge on clauster 195 along vector 205. Note the

reference numbers used in this patent's specification and figure 14 do not have a direct

correlation. See column 9 line 53 to column 10 line 23.

Claim 1:

Gallivan teaches a system for generating a two-dimensional spatial arrangement

of a multi-dimensional cluster rendering (*Refer to figure 14 and column 9 lines 61-66.*),

comprising:

a set of stored clusters from a concept space comprising a multiplicity of clusters

visualizing document content based on extracted terms (*See column 9 lines 13-42.*),

each cluster in the clusters set sharing a common theme (*See column 10 lines 13-14.*)

comprising shared terms;

a placement module determining an anchor point on at least one such cluster

within the clusters set, the anchor point comprising at least one open edge formed along

a vector defined from the center of the at least one such cluster (*Gallivan shows an*

anchor point where vector 205 intersects cluster 195 and where cluster 193 has a small,

less than 20% overlap on cluster 195. Thus, this intersection is at an open edge on the

displayed cluster's edge.); and   arranging the clusters in the clusters set into an

arrangement of adjacent clusters originating from the anchor point at one such open

edge (*Clusters 193 and 195 of the cluster set are arranged originating from the anchor*

point at the open edge. Arguably cluster 194 originates from the anchor point at the

same open edge the cluster 193 originates from.).

Claim 8:

Gallivan teaches a system according to claim 1, further comprising:

a rendering module rendering each cluster as a circle having an independent

radius (*Figure 14 shows the clusters rendered as circles. Column 10 line 19 describes*

the clusters as circular shape but also describes the clusters may be non-circular

shaped.).

Claim 9:

Gallivan teaches a system according to claim 8, wherein each circle has a

volume dependent on a number of concepts contained in the cluster (*Column 10 line 22*

discusses the clusters having volume. Column 10 lines 10-12 discusses the radii being

relative to number of document contained in the cluster. Column 9 lines 43-52 and 65-

66 discusses concepts within a cluster and clusters of concepts. Thus, Gallivan

teaches a volume dependent on a number of concepts contained in the cluster.).

Claim 10:

Gallivan teaches a system according to claim 1, further comprising:

a rendering module rendering each cluster as a convex volume (*Column 10 line*

22 discusses the clusters having convex volume.).

Claim 11:

Gallivan teaches a system according to Claim 1, wherein the placement module

determines a further anchor point on at least one such cluster within the clusters

set (*Taking cluster 193 as a first cluster then cluster 196 may be considered an*

additional cluster that is attached to a further anchor point.), further comprising:

a grafting submodule grafting an additional arrangement originating from

the further anchor point at one such open edge (*Cluster 196 is an additional*

arrangement from a further anchor point.).

Claim 12:

Gallivan teaches a system according to Claim 1, further comprising:

a grouping submodule placing each cluster having a theme different than

the common theme (*See figure 13*).

Claim 13:

Gallivan teaches a system according to claim 1, wherein each convex shape

represents visualized data for a virtual semantic concept space (*Column 9 line 61 to*

column 10 line 22 teaches virtual semantic concept space and convex shape

representing the cluster in the virtual semantic concept space.).

Claims 14 and 21-26:

These method claims correspond to system claims 1 and 8-13 are rejected for

the reasons given for the system claims since the system claims and the method claims

claim the same function.

Claim 27:

This claim is a multiple dependent claim that is dependent upon rejected method

claims 14 and 21-26. Gallivan teaches at column 5 line 60 to column 6 line 2 a

computer readable medium storing source code causing the computer (CPU) to perform

the method of claims 14 and 21-26.

Claim 28:

Gallivan teaches a system for arranging concept clusters in thematic relationship

in a two-dimensional visual display space (*Refer to figure 14 and column 9 lines 61-66.*),

comprising:

a plurality of stored clusters selected from a multi-dimensional visualization

space sharing a common theme comprising at least one concept (*See column 9 lines*

13-42.), each theme logically representing one or more concepts based on terms

extracted from a document set (*See column 9 lines 61 to column 10 line 3 and column*

10 lines 13-14.);

a placement module combining in order each cluster not yet grouped from the

selected clusters for the shared common theme into a list of placeable clusters (*Column*

9 lines 33-42.); and

grafting each clusters list into a grouping of one or more other clusters lists

(*Column 9 lines 33-42*) at an anchor point comprising an open edge formed along a

vector defined from the center of one such cluster in the grouping (*Gallivan shows an*

anchor point where vector 205 intersects cluster 195 and where cluster 193 has a small,

less than 20% overlap on cluster 195. Thus, this intersection is at an open edge on the

displayed cluster's edge.), the clusters in each other clusters list sharing at least one

concept represented in the shared common theme (*Column 10 lines 13-15 describes*

the clusters on the same vector having a shared common theme. Thus, the list of

concepts for each of the clusters on the same vector share at least one concept.).

Claim 29:

Gallivan teaches a system according to Claim 28, further comprising:

a sort module sorting the clusters in each clusters list in sequence (*See figure 13.*).

Claim 30:

Gallivan teaches a system according to Clahn 29, wherein the sequence

comprises a number of documents containing the one or more logically represented

Concepts (*See figure 13.*).

Claim 31:

Gallivan teaches a system according to Claim 29, wherein the sequence

comprises one of ascending and descending order (*See figure 13.*).

Claim 32:

Gallivan teaches a system according to claim 28, wherein each cluster is formed

as one of a circular and non-circular convex volume (*Figure 14 shows the clusters

rendered as circles. Column 10 line 19 describes the clusters as circular shape but also

describes the clusters may be non-circular shaped.*).

Claim 34:

Gallivan teaches a system according to claim 28, further comprising:

a display and visualize module generating a visual display space containing the

groupings of clusters lists (*Column 9 lines 61-65 teaches displaying the clusters in

visual display space.*).

Claim 35:

Gallivan teaches a system according to Claim 28, wherein the theme contains

concepts within a pre-specified range of variance (*Each cluster has a theme that*

contains concepts within a pre-specifced range, see figure 13).

Claims 36-40, 42 and 43:

These method claims correspond to system claims 28-32, 34 and 35 are rejected

for the reasons given for the system claims since the system claims and the method

claims claim the same function.

Claim 44:

This claim is a multiple dependent claim that is dependent upon rejected method

claims 36-40, 42 and 43. Gallivan teaches at column 5 line 60 to column 6 line 2 a

computer readable medium storing source code causing the computer (CPU) to perform

the method of claims 36-40, 42 and 43.

Prior Art

9.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

North, U.S. Patent No. 5,450,535 teaches arranging cluster nodes to form non-

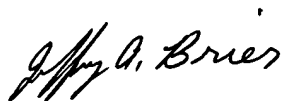overlapping clusters, column 3 lines 62-64.

10. A prior art rejection cannot be made because the metes and bounds of claims 2-7, 15-20, 33, and 41 are not definite. Are the claims limited to arranging displayed clusters? Are the claims limited to a arranging database items? If they are the latter then the Gallivan reference may even teach these claims. If they are the former then Gallivan probably does not teach these claims. Thus, an indication of allowability would be premature. In re Steele, 305 F.2d 859,134 USPQ 292 (CCPA 1962) (it is improper to rely on speculative assumptions regarding the meaning of a claim and then base a rejection under 35 U.S.C. 103 on these assumptions).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A Brier whose telephone number is (571) 272-7656. The examiner can normally be reached on M-F from 7:00 to 3:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (571) 272-7664. The fax phone Number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Jeffery A Brier
Primary Examiner
Art Unit 2672